IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	PEUKER, MARC		
Application No.:	10/598613	Confirmation No.:	7832
Filed:	10-MAR-2005	Group Art Unit	3700
Title:	CAPSULE FOR STORAGE, MIXING AND DISPENSING MATERIALS		

BRIEF ON APPEAL

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December 20, 2011 /Tracey L. Riley/
Date Signed by: Tracey L. Riley

Dear Sir:

This is in appeal to the Office Action, dated June 28, 2011, finally rejecting claims 1 through 10 and 20 through 25 in the United States patent application identified above. A Notice of Appeal in this application was filed on October 26, 2011, and was received in the USPTO on October 26, 2011. The deadline for filing this Brief on Appeal is December 26, 2011, and accordingly it is timely filed.

Appellants request the opportunity for a personal appearance before the Board of Appeals to argue the issues of this appeal. The fee for the personal appearance would be payable upon receipt of the Examiner's Answer.

Fees

☒ Any required fee under 37 CFR § 41.20(b)(2) will be made at the time of submission via EFS-Web. In the event fees are not or cannot be paid at the time of EFS-Web submission, please charge any fees under 37 CFR § 1.17 which may be required to Deposit Account No. 13-3723.

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☒ Please charge any additional fees associated with the prosecution of this application to Deposit Account No. 13-3723. This authorization includes the fee for any necessary extension of time under 37 CFR § 1.136(a). To the extent any such extension should become necessary, it is hereby requested.

☒ Please credit any overpayment to the same deposit account.

REAL PARTY IN INTEREST

The real party in interest is 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

STATUS OF CLAIMS

Claims 1 through 10 and 20 through 25 are pending and stand finally rejected.

STATUS OF AMENDMENTS

No amendments have been filed after the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The claims at issued concern a capsule for storage and mixing and dispensing of dental material. The capsule includes a capsule body member providing a main chamber, and having a dispensing opening, wherein the inner wall of the capsule body member comprises a recessed area. Page 11, lines 11-15; lines 23-28. The capsule further includes an applicator member adapted for slideable accommodation in the capsule body member, and providing an auxiliary chamber. Page 11, lines 17-21. The applicator member includes a through-hole extending from the auxiliary chamber to the outer circumferential surface of the applicator member. Page 11, lines 23-25. The capsule further includes an activator member being slideably accommodated in the applicator member, and the through-hole and recessed area forming a channel between the main chamber and the auxiliary chamber upon activation of the capsule due to movement of the activator member towards said dispensing opening, causing movement of the applicator member due to hydraulic transmission. Page 11, lines 19-32; Page 3, lines 24-25.

FIRST GROUND OF REJECTION

Claims 1 through 10 and 20 through 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 3,279,654 (Pierick) in view of U.S. Patent No. 2,869,543 (Ratcliff et al.).

ARGUMENT

First Ground of Rejection

Claims 1 through 10 and 20 through 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over Pierick in view of Ratcliff et al. Appellants disagree and respectfully request that the rejection be reversed.

Pierick describes a syringe having a casing 11 with an open rear end 12, and a plunger 16 for insertion into the casing 11 and having an open rear end 18 normally closed by a flanged knob 19. Col. 2, lines 41-46. A first component is placed in the body 21 of casing 11, and a second component is placed in plunger body 31 of plunger 16 when plunger 16 is positioned in the casing 11 with the knob 19 removed. Col. 3, lines 20-27. When the plunger has moved into the casing such that a front seal 33 is moved past a rear shoulder 38, the component within the plunger is free to flow by gravity into the casing body to mix with the contents of the casing body. Col. 3, lines 51-58.

Ratcliff et al. describes an injector having a first cylindrical barrel 12, a second cylindrical barrel 14 slidably disposed within the first barrel, and a plunger rod 16 slideably disposed in barrel 14. Col. 1, lines 65-69. A removable cap 34 is provided at the end of a spout on barrel 14 within barrel 12. Col. 2, lines 10-11. In use, the plunger rod 16 is pushed "to its full depth within barrel 14," causing the cap 34 to be ejected from spout 30 and allowing the diluent 52 to pass into chamber 46, as shown in Figure 4 reproduced below. Col. 2, lines 47-62.

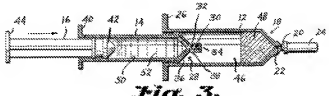

Fig. 3.

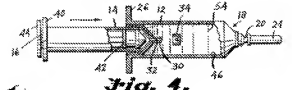

Fig. 4.

The Examiner indicated that Pierick describes a capsule that includes each element of claims 1 and 25 except that movement of the activator member towards the dispensing opening causes movement of the applicator member due to hydraulic transmission. Office Action, p. 4. The Examiner concluded, however, that the device of Ratcliff et al. includes these features, and that it would have been obvious to one of skill in the art to modify the device of Pierick with features of Ratcliff et al. to arrive at the claimed device. Appellants disagree for at least the following three reasons.

First, Pierick does not disclose or suggest movement of an applicator member due to hydraulic transmission, as noted by the Examiner, and it is not clear how the device of Pierick would function in the presence of such a feature. Pierick describes a knob 19 that closes the open rear end 18 of plunger 16. The knob 19 is inserted into the open end 18 after the plunger 16 is inserted into the casing 11 and material has been placed in the plunger 16. If the knob 18, or some other feature substituted for the knob, were to cause movement of the plunger 16 due to hydraulic transmission, the knob or other feature could not be positioned within the open rear end 18 to close the plunger. That is, rather than being received in the plunger, the plunger would move forward, and the contents would pass to the casing body before the device was fully assembled. Further, because the device could not be assembled, the resulting device would presumably lack an "activator member being slideably accommodated *in said applicator member*," as required by claim 1. Accordingly, even if a feature that causes forward movement of the plunger 16 due to hydraulic transmission were incorporated into the device of Pierick, the resulting device would not be functional and would not include each element of claim 1.

Second, claim 1 is not unpatentable under 35 U.S.C. §103 (a) in view of Pierick and Ratcliff et al. because the proposed combination does not include each element of independent claim 1. Claim 1 requires, in part, a through-hole and recessed area "forming a channel between said main chamber and said auxiliary chamber upon activation of said capsule *due to movement of said activator member towards said dispensing opening, causing movement of said applicator member due to hydraulic transmission.*" (emphasis added). The device of Ratcliff et al., however, is not activated, or otherwise operated, by movement of an activator member causing movement of an applicator member due to hydraulic transmission, as required by claim 1. In the device of Ratcliff et al., an opening for contents to pass into chamber 46 is said to be provided when compression of the contents of chamber 52 causes cap 34 to be ejected. This compression results when plunger rod 16 is moved towards the dispensing opening while barrel 14 is *fixed* relative to the dispensing opening, as viewed in Figures 3 and 4, reproduced above. That is, activation does not occur *by movement* of barrel 14 due to *hydraulic transmission,* but rather occurs when *forward movement* of barrel 14 *is prevented.* Only after plunger rod 16 is pushed to "its full depth within barrel 14 as shown in Fig. 4," reproduced above, is barrel 14 moved forward to dispense the material. This forward movement is not "due to hydraulic transmission," but rather is the result of mechanical transmission caused by the presence of plunger rod 16 at the "full depth" within the barrel. Accordingly, Ratcliff et al. provides no description or suggestion of "movement of said activator member towards said dispensing opening, causing movement of said applicator member due to hydraulic transmission," as required by claim 1. Claim 1 is therefore patentable over the proposed combination, which does not include or suggest each element of claim 1.

Third, Ratcliff et al. would be understood by one of skill in the art as teaching away from a device in which movement of an activator member towards a dispensing opening causes movement of an applicator due to hydraulic transmission, because it is the *absence* of such a feature that allows the device of Ratcliff et al. to function as described. If the barrel 14 were moved with the plunger rod 16 due to hydraulic transmission, no compression of the contents of chamber 52 could be generated, the cap could not be ejected, and the device would not function as described by Ratcliff et al. The outlet of barrel 14 would presumably reach the front of barrel 12 with the cap still covering the outlet, and with no pathway for the contents of the barrel to be

dispensed. Ratcliff et al. cannot logically be said to suggest a feature that would destroy the functionality of the device, and thus one of skill in the art would not consider the proposed combination of Pierick and Ratcliff et al, much less consider such a combination to be obvious.

Ultimately, combination of the device of Pierick, which *lacks* any description or suggestion of movement of an applicator member due to hydraulic transmission, with the device of Ratcliff et al., which similarly *lacks* such a feature, cannot logically be said to result in a device that *includes* this feature. Furthermore, the functionality of each device described by Pierick and Ratcliff et al. would be lost in a device wherein movement of an activator member towards a dispensing opening causes movement of an applicator member due to hydraulic transmission. Accordingly, the proposed combination does not render claim 1 obvious. Claims 2 through 10 and 20 through 25 depend from or include each limitation of claim 1, and are similarly in condition for allowance. It is respectfully requested that the rejections of claims 1 through 10 and 20 through 25 be reversed.

CONCLUSION

For the foregoing reasons, Appellants respectfully request that the Board reverse the Examiner on all counts.

Respectfully submitted,

December 19, 2011
Date

By: /Peter L. Olson/
Peter Olson, Reg. No.: 35,308
Telephone No.: 651-736-4050

PLO/cad
Document No. 984462
Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833

CLAIMS APPENDIX:

1. (Previously Presented) Capsule for storage and mixing and dispensing of dental material comprising:

a capsule body member providing a main chamber, and comprising a dispensing opening, wherein the inner wall of the capsule body member comprises a recessed area;

an applicator member adapted for slideable accommodation in said capsule body member, said applicator member providing an auxiliary chamber, and wherein said applicator member comprises a through-hole extending from the auxiliary chamber to the outer circumferential surface of the applicator member; and

an activator member being slideably accommodated in said applicator member;

said through-hole and said recessed area forming a channel between said main chamber and said auxiliary chamber upon activation of said capsule due to movement of said activator member towards said dispensing opening, causing movement of said applicator member due to hydraulic transmission.

2. (Original) The capsule of claim 1, wherein said radially extending through-hole in said applicator member is initially covered by the wall of said capsule body member.

3. (Previously presented) The capsule of claim 1, wherein said radially extending through-hole is located in close proximity to the separation wall of said applicator member separating said auxiliary chamber from said mixing chamber.

4. (Previously presented) The capsule of claim 1, wherein said through-hole extends essentially perpendicularly to the longitudinal axis of said applicator member.

5. (Previously presented) The capsule of claim 1, wherein said through-hole extends essentially at an angle smaller than 90° to the longitudinal axis of said applicator member.

6. (Previously presented) The capsule of claim 3, wherein said separation wall comprise a raised area extending towards said activator member.

7. (Original) The capsule of claim 6, wherein said raised area comprises an annular bulge.

8. (Previously presented) The capsule of claim 1, wherein said applicator member comprises a sealing element sealing said through-hole of said applicator member against said recessed area of said body member and against the exterior of said capsule.

9. (Previously presented) The capsule of claim 1, said activator member comprising an activator sealing element for sealing said activator member against said applicator member.

10. (Previously presented) The capsule of claim 8, wherein said sealing elements are manufactured by a two-component injection moulding process together with the capsule body member, the applicator member and said activator member.

11. (Withdrawn) Capsule for storage, mixing and dispensing of material comprising:
a capsule body member providing a main chamber, and comprising a dispensing opening;
an applicator member being slideably accommodated in said capsule body member, said applicator member providing an auxiliary chamber; and
an activator member being slideably accommodated in said applicator member;
said main chamber and said auxiliary chamber being selectively connectable for fluid communication between said chambers due to movement of said activator member towards said dispensing opening, causing movement of said applicator member due to hydraulic transmission;
wherein said activator member comprises an internal channel system extending from the rear end of the activator member to an annular groove remote from the rear end of said activator member.

12. (Withdrawn) The capsule of claim 11, wherein said annular groove of said internal channel system is located adjacent to the front end of the activator member.

13. (Withdrawn) The capsule of claim 11, wherein said internal channel system accommodates a sealing material.

14. (Withdrawn) The capsule of claim 13, wherein the sealing material accommodated in the internal channel system of the activator member seals the gap between the applicator member and the activator member.

15. (Withdrawn) The capsule of claim 13, wherein the sealing material is a flowable hardenable material.

16. (Withdrawn) The capsule of claim 11, wherein the applicator member comprises a through-hole providing a channel between said auxiliary chamber in said applicator member and said main chamber.

17. (Withdrawn) The capsule of claim 16, wherein said through-hole is closed by a membrane.

18. (Withdrawn) The capsule of claim 11, said activator member comprising a convex or tapering or conical or truncated front end surface.

19. (Withdrawn) The capsule of claim 11, said activator member comprising a concave or funnel-shaped or reverse-truncated front end surface and a vent channel extending from said front end surface to the exterior or environment or surroundings, preferably via said internal channel system.

20. (Previously presented) The capsule of claim 1 or 11, further comprising a dispensing cannula connected to said dispensing opening.

21. (Original) The capsule of claim 20, wherein the dispensing cannula is integrally formed with said capsule body member.

22. (Original) The capsule of claim 20, wherein said cannula is rotatably connected to said capsule body member thus providing a valve.

23. (Previously Presented) The capsule of claim 1 or 11, wherein said dental material is a glass ionomer cement or a resin modified glass ionomer cement.

24. (Previously presented) The capsule of claim 1 or 11, wherein said main chamber contains a first, preferably powdery, component of said material, and said auxiliary chamber contains a second, preferably liquid, component of said material.

25. (Previously presented) Kit, comprising at least one of the capsules of claim 1 or 11.

26. (Canceled)

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None